

Technical specifications_400V

Item	Advanced Static Var Generator			
	Sinexcel ASVG 030	Sinexcel ASVG 050	Sinexcel ASVG 100	Sinexcel ASVG 200
System Parameter				
Rated input line voltage	400V			
Input phase voltage ange	228V~456V			
Power grid frequency	50Hz/60Hz(range:45Hz~62Hz)			
Parallel operation	Unlimited			
Overall efficiency	>97%			
Power grid structure	3P3W/3P4W			
CT	50/5~30,000/5			
Circuit topology	3-Level			
Performance Indicator				
Single-module compensation capacity	30kvar	50kvar	100kvar	200kvar
Response time	<15ms			
Target power factor	Adjustable from -1 to +1			
Cooling mode	115L/sec	222L/sec	360L/sec	500L/sec
Noise level per module	<65dB			<75dB
Communication & Monitoring Capability				
Communications ports	RS485,CAN (reserved), Ethernet port (RJ45)			
Communications portocols	Modbus			
Protection functions	Abnormal voltage/frequency protection; Inverter short-circuit protection; Abnormal output current protection; Inverter over-loaded protection, Over-tempearture protection etc.,.			
Alarm	Available			
Monitoring	4.3-inch touch screen monitor and optional 7-inch touch screen centralized monitor			
Mechanical Properties				
Mounting type	Wall-mounted/Rack-mounted/Cabinet			
Cable entry mode	Rear entry for rack-mounted type Top entry for wall-mounted type; Top or bottom entry for cabinet			
Dimensions(W x D x H)(mm ³)	500*515*180 (Rack-mounted) 500*180*540 (Wall-mounted)	500*546*190 (Rack-mounted) 500*190*571 (Wall-mounted)	500x605x269 (Rack-mounted) 500x273x638 (Wall-mounted)	500*722*370 (Rack-mounted) 500*370*722 (Wall-mounted)
Module net weight	23kg	28kg	44kg	110kg
Color	RAL7035(gray)			
Environment Requirement				
Altitude	≤1500m; Between 1500m to 4000m, derating 1% every additional 100m.			
Ambient temperature	-10℃~40℃(may derate capacity if ambient temperature exceeds 45℃)			
Relative humidity	5%~95%,non-condensing			
protection grade	IP20(other IP degrees are customizable)			
Related Qualifications & Standards				
Qualifications	CE, cETLus			



A Saftey "One-stop" General Compensation Technique

Power factor, Three-phase unbalanced and Low-order harmonic synchronization control

- Power factor correction & Three-phase balancing
- Support low-order (3, 5, 7, 9, 11 13 orders) harmonic compensation (< 50% rated capacity)

Resonance avoidance

- ASVG is a current source device which avoids resonance phenomena in mechanism.

Multiple compensation applications

- ASVG separate compensation
- ASVG+SVC combined compensation

Excellent harmonic characteristics

- No harmonic is generated, no harmonic is amplified and the odd harmonic orders lower than 13th can be filtered.

Stepless adjustment

- ASVG can realize dynamic stepless adjustment without over-compensation and under-compensation.

Modularized product design

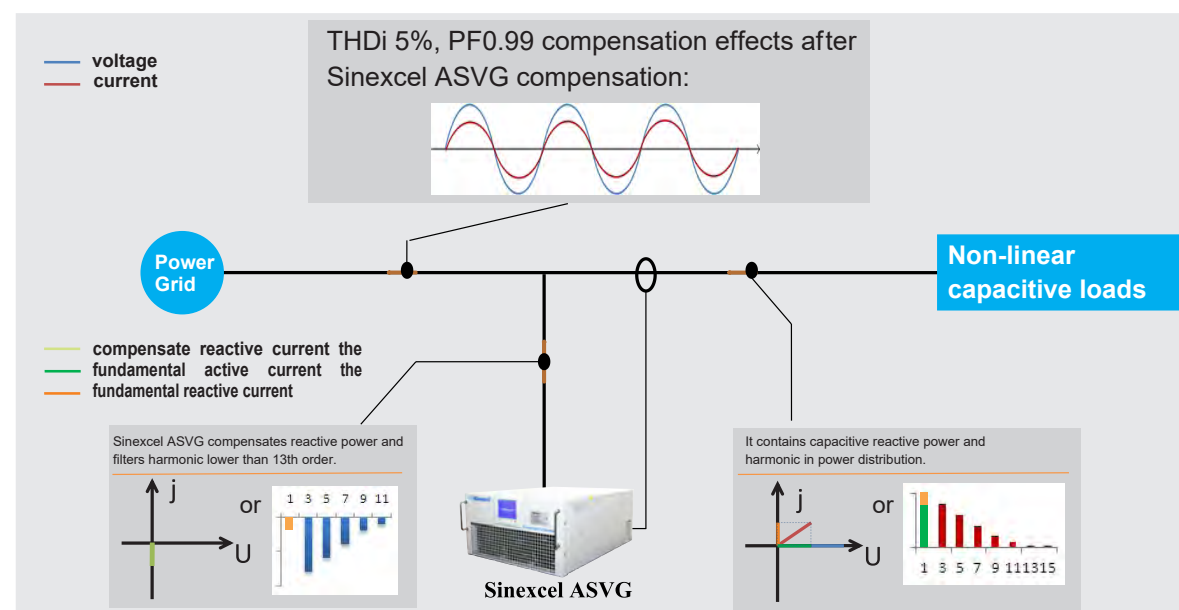
- ASVG adopts modular product design and cabinet installation.
- It features convenient engineering design and installation.

Operating principle

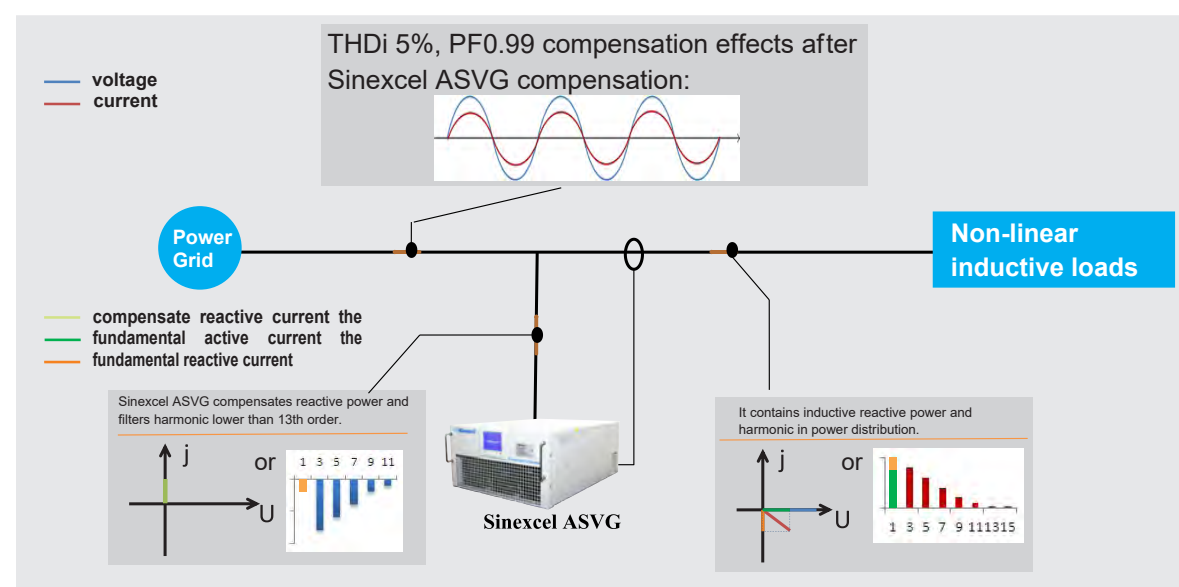
Sinexcel Advanced Static Var Generator (ASVG) conducts real-time monitoring to load current through external Current Transformer (CT) and detects reactive components and harmonic from load current through the calculation of internal Digital Signal Processor (DSP), then transmits PWM signal to internal Insulated Gate Bipolar Transistor (IGBT). Conforming reactive current and low-order harmonic current are generated by inverter with control settings to achieve reactive compensation and control harmonic.

ASVG operating principle diagram

Sinexcel ASVG compensate non-linear capacitive loads



Sinexcel ASVG compensate non-linear inductive loads



Technical specifications_UL

Item	208V	480V	600V	690V
	Sinexcel ASVG 35	Sinexcel ASVG 30/40/50/80	Sinexcel ASVG 40/50/80/100	Sinexcel ASVG 40/50/80/120
System Parameter				
Input phase voltage range	208V(176V~264V)	384V~552V	420V~690V	483V~793V
Power grid frequency	50Hz/60Hz(range:45Hz~66Hz)			
Parallel operation	Unlimited			
Overall efficiency	≥97%			
Power grid structure	3P3W/3P4W			
CT	150/5~30,000/5			
Circute topology	3-Level			
Performance Indicator				
Single-module compensation capacity	35kvar	30/40/50/80kvar	40/50/80/100kvar	40/50/80/120kvar
Function	Reactive power compensation, Three phase balancing, Voltage regulation			
Response time	<15ms			
Target power factor	Adjustable from-1 to +1			
Cooling mode	761CFM	725CFM(30/40kvar) 761CFM(50/80kvar)	725CFM (40/50kvar) 761CFM (80/100kvar)	725CFM (40/50kvar) 761CFM (80/120kvar)
Noise level per module	<65dB			
Communication & Monitoring Capability				
Communications ports	RS485, CAN(reserved), Ethernet port(RJ45)			
Communications protocols	Modbus			
Protection functions	Abnormal voltage/frequency protection; Inverter short-circuit protection; Abnormal output current protection; Inverter over-loaded protection; Over-tempearture protection etc.			
Alarm	Available			
Monitoring	7-inch touch screen centralized monitor(rack-mount) and 4.3-inch touch screen monitor(wall-mount)			
Mechanical Properties				
Mounting type	Wall-mounted/Rack-mounted/Cabinet			
Cable entry mode	Top and bottom entry for cabinet			
Dimensions (W×D×H)(mm³)	500*675*250 (Rack-mounted) 500*250*723 (Wall-mounted)	For 30/40kvar 500*540*180 (Rack-mounted) 500*184*627 (Wall-mouned) For 50/80kvar 500*675*250 (Rack-mounted) 500*250*723 (Wall-mounted)	For 40/50kvar 500*540*180 (Rack-mounted) 500*184*627 (Wall-mouned) For 80/100kvar 500*675*250 (Rack-mounted) 500*250*723 (Wall-mounted)	For 40/50kvar 500*540*180 (Rack-mounted) 500*184*627 (Wall-mouned) For 80/120kvar 500*675*250 (Rack-mounted) 500*250*723 (Wall-mounted)
Module net weight	70kg	40kg(30/40kvar) 70kg(50/80kvar)	40kg(40/50kvar) 70kg(80/100kvar)	40kg(40/50kvar) 70kg(80/120kvar)
Color	Wall mounted: RAL7035(gray), Rack mounted: original color of aluminum-zinc			
Environment Requirement				
Altitude	≤1500m; Between 1500m to 4000m, derating 1% every additional 100m			
Ambient temperature	-20℃~40℃(may derate capacity if ambient temperature exceeds 45℃)			
Relative temperature	5%~95%, non-condensing			
Protection grade	IP20(other IP degrees are customizable)			
Related Qualifications & Standards				
Qualifications	CE, cETLus, cULus			